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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,830	08/25/2000	Martin J. Steffensmeier	00CR002/KE	6297

7590 11/16/2005

Rockwell Collins Inc  
Intellectual Property Department  
400 Collins Road NE M/S 124-323  
Cedar Rapids, IA 52498

EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/648,830	<b>Applicant(s)</b> STEFFENSMEIER ET AL.	
	<b>Examiner</b> Kevin M. Nguyen	<b>Art Unit</b> 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is made in response to applicant's amendment/argument filed on 10/10/2004. Claims 1-20 are currently pending in the application. Applicant's arguments, see page 8, filed 10/10/2005, with respect to the rejection(s) of claim(s) 1-20 under the statutory basis for the previous rejection have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 5-8, 10, 12-15, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watamoto et al (previously cited, US 6,392,695) hereinafter Watamoto in view of Falkman et al (previously cited, US 4,677,430) hereinafter Falkman.

4. As to claims 1 and 8, Watamoto teaches a method of reducing luminance decay of emissive elements in a matrix addressed emissive display device (an embodiment 4 comprises image display means and an operating procedure for preventing screen burn-in, see col. 6, lines 25-29), the method comprising:

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generating control data corresponding to a static image to be displayed and generating drive signals as a function of the control data (preproduction of a disc is discontinued when a motionless image is continued displayed in a screen for a long period of time, col. 7, lines 20-23);

providing the drive signals to the matrix to thereby energize the corresponding emissive display elements of the matrix in order to display the static image on the matrix (deterioration preventor 508 receives information from DVD 504 and TV 506 and generates control signals to each, col. 7, lines 39-41. A DVD, CD, or video-CD 504 is connected to display unit 502, col. 7, lines 36-28, defined providing the drive signals to display elements. A screen burn-in preventor 510 (fig. 5) functions as the static image adjustment during reproduction of the CD according to above constitution is described, col. 6, lines 51-53).

altering the control data, substantially continuously, such that the drive signals are substantially continuously altered to thereby substantially continuously move the static image (step 409 is a step to instruct the changing of the static image adjustment value, col. 6, lines 46-47).

Accordingly, Watamoto teaches all of the claimed limitations except for substantially continuously move the static image on the matrix in a manner which is substantially undetectable to the viewers of the display device.

However, Falkman discloses the conventional CRT display device that includes the display of stationary image is prevented and the movement of the pattern is sufficiently slow to be imperceptible to the viewer (col. 1, lines 34-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the display of stationary image is prevented and the movement of the pattern is sufficiently slow to be imperceptible to the viewer of the CRT device as conventionally disclosed by Falkman in the Watamoto's reference in order to achieve the benefit of prevent burn-in of the screen of the CRT display device (Falkman, col. 1, lines 62), a flexible method of operating a display monitor to prevent burn-in without requiring that complex and experience modification be made to the monitor itself (Falkman, col. 1, lines 52-55).

As to claims 3 and 10, Watamoto teaches the matrix addressed emissive display device of claims 1 and 8, wherein the matrix is a cathode ray tube, a plasma display device or the like may be employed (col. 7, lines 31-33).

As to claims 5 and 12, Watamoto teaches the method of claim 1, wherein generating control data corresponding to the static image to be displayed on the matrix of individually addressable emissive display elements further comprises:

defining an image origin of the static image; assigning the image origin for the static image to an emissive display element in the matrix (preproduction of a disc is discontinued when a motionless image is continued displayed in a screen for a long period of time, col. 7, lines 20-23);

generating control data for each emissive display element in the matrix based upon its respective position relative to the emissive display element to which the image origin has been assigned (deterioration preventor 508 receives information from DVD 504 and TV 506 and generates control signals to each, col. 7, lines 39-41. A DVD, CD, or video-CD 504 is connected to display unit 502, col. 7, lines 36-28, assigning the image origin. A screen burn-in preventor 510 (fig. 5) functions as the static image adjustment during reproduction of the CD according to above constitution is described, col. 6, lines 51-53).

As to claims 6 and 13, Watamoto teaches the method of claim 5, wherein assigning the image origin further comprises initially assigning the image origin for the static image to the display origin (preproduction of a disc is discontinued when a motionless image is continued displayed in a screen for a long period of time, col. 7, lines 20-23).

As to claims 7 and 14, Watamoto teaches the method of claim 6, wherein altering the control data further comprises reassigning the image origin for the static image to a different emissive display element in the matrix such that the image origin moves relative to the display origin (A screen burn-in preventor 510 (fig. 5) functions as the static image adjustment during reproduction of the CD according to above constitution is described, col. 6, lines 51-53).

5. As to claim 15, Watamoto teaches a matrix addressed emissive display device, (an image display device 500, fig. 5), comprising:

a matrix of individually addressable emissive display element (the display means 502, fig. 5).

graphics means for controlling the matrix to display a static image on the matrix and to substantially continuously move the static image on the matrix (deterioration preventor 508 receives information from DVD 504 and TV 506 and generates control signals to each, col. 7, lines 39-41. A DVD, CD, or video-CD 504 is connected to display unit 502, col. 7, lines 36-28, defined graphics means assign the image origin. A screen burn-in preventor 510 (fig. 5) functions as the static image adjustment during reproduction of the CD according to above constitution is described, col. 6, lines 51-53).

Accordingly, Watamoto teaches all of the claimed limitations except for substantially continuously move the static image on the matrix in a manner which is substantially undetectable to the viewers of the display device.

However, Falkman discloses the conventional CRT display device that includes the display of stationary image is prevented and the movement of the pattern is sufficiently slow to be imperceptible to the viewer (col. 1, lines 34-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the display of stationary image is prevented and the movement of the pattern is sufficiently slow to be imperceptible to the viewer of the CRT device as conventionally disclosed by Falkman in the Watamoto's reference in order to achieve the benefit of prevent burn-in of the screen of the CRT display device (Falkman, col. 1, lines 62), a flexible method of operating a display monitor to prevent burn-in without

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requiring that complex and experience modification be made to the monitor itself (Falkman, col. 1, lines 52-55).

As to claim 17, Watamoto teaches the matrix addressed emissive display device of claim 15, wherein the matrix is a plasma display device or the like may be employed (col. 7, lines 31-33).

As to claims 19 and 20, Watamoto teaches the matrix addressed emissive display of claim 15, wherein graphics means id adapted to define an image origin for the static image and to assign the image origin for the static image to an emissive display element in the matrix, the graphics further adapted to generate control data for each emissive display element in the matrix based on its respective position relative to the emissive display element to which the image origin has been assigned (deterioration preventor 508 receives information from DVD 504 and TV 506 and generates control signals to each, col. 7, lines 39-41. A DVD, CD, or video-CD 504 is connected to display unit 502, col. 7, lines 36-28, defined graphics means for assign the image origin. A screen burn-in preventor 510 (fig. 5) functions as the static image adjustment during reproduction of the CD according to above constitution is described, col. 6, lines 51-53).

6. Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watamoto in view of Falkman, an further in view of Toffolo et al (US 5,900,851) hereinafter Toffolo.

7. As to claims 2, 9 and 16, the combination of Watamoto and Falkman teach all of the claimed limitation of claims 1, 8 and 15, except for the matrix of light emitting diodes.



However, Toffolo teaches electroluminescent display panel 22 (see fig. 1) which inherent includes the matrix of light emitting diodes.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize electroluminescent display panel 22 which inherent includes the matrix of light emitting diodes taught by Toffolo in the combination Watamoto and Falkman in order to achieve the benefit of prevent screen burn-in on the matrix of light emitting diodes (Toffolo, col. 2, lines 8-9).

8. Claims 4, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watamoto in view of Falkman, and further in view of Marflak et al (US 6,369,851) hereinafter Marflak.

9. As to claims 4, 11 and 18, the combination of Watamoto and Falkman teach all of the claimed limitation of claims 1, 8 and 15, except for a field effect display matrix.

However, Marflak teaches a flat cathode ray tube 308 (see fig. 3) which inherent includes a field effect display matrix.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the flat cathode ray tube 308 which inherent includes the field effect display matrix taught by Marflak in the combination of Watamoto and Falkman in order to achieve the benefit of minimize burn lines on the field effect display matrix (see the title of Marflak).

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. The prior arts made of record and not relied upon are considered pertinent to applicant's disclosure. Shen et al (US 6,262,772) and Kato (JP 06-332418) teach a method and an apparatus for preventing display screen burn-in on the matrix addressed emissive display devices.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KMN  
November 1, 2005

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Patent Examiner  
Art Unit 2674



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